

# **Appendix A**



Attorney's Docket No.: 14952.0307 / Case 8895

## THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Yet-Ming Chiang et al. Art Unit : 1796  
Serial No. : 10/510,482 Examiner : Saira Bano Haider  
Filed : April 19, 2005  
Title : CARBON NANOPARTICLES AND COMPOSITE PARTICLES AND  
PROCESS OF MANUFACTURE

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**DECLARATION OF JOHN VANDER SANDE UNDER 37 C.F.R. §1.132**

I, John B. Vander Sande, declare:

1. I am the Cecil and Ida Green Distinguished Professor Emeritus in the Department of Materials Science and Engineering at the Massachusetts Institute of Technology.
2. I am an inventor of the subject matter disclosed and claimed in the above-captioned application.
3. I have been investigating carbonaceous materials in detail as part of my academic research for approximately twenty years. Over the past ten years or so I have concentrated my research work on the production and characterization of fullerenes and fullerene structures produced by a combustion process. Most of this work has involved the use of transmission electron microscopy. At least twenty papers on my work in this area have appeared in the open, peer reviewed literature.
4. I have reviewed U.S. Patent No. 5,547,748 to Ruoff et al. ("Ruoff"). Upon review of Ruoff, particularly Fig. 9 and the associated text, my conclusion is that the spiny structures, or whiskers, illustrated in Fig. 9, are of indeterminate nature. Fig. 9 does not prove that the spiny structures are composed of nanotubes; they could be nanorods (i.e., solid

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cylinders). It is also not clear whether these are fullerenic carbon or some other form of carbon, e.g. amorphous or graphitic carbon.

5. All statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Date: December 05, 2008 \_\_\_\_\_ John B. Vander Sande

  
John B. Vander Sande